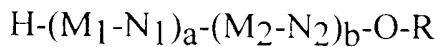
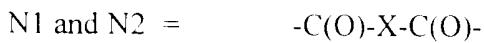
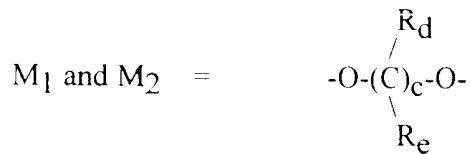


WHAT IS CLAIMED IS:

1. A polymer composition comprising a first biodegradable polymer comprising a polyhydroxyalkanoate (PHA), a second biodegradable polymer different from the first polymer, and one or more oligomeric esters.
2. The composition of claim 1 wherein the oligomeric ester has the structural formula:



where:



X is C_6H_4 or $(CH_2)_f$

a and b are independently 0 or an integer from 1 to 200;

c and f are independently integers from 1 to 30;

R is H or C_1-C_{12} alkyl or branched alkyl; and

R_d and R_e are H, or C_1-C_{12} alkyl or branched alkyl and can vary independently with each $(C)_c$.

3. The composition of claim 2 wherein f is 2 to 10.

4. The composition of claim 2 wherein f is 4.

5. The composition of claim 1 wherein the oligomeric ester is poly(1,3-butylene glycol-co-1,2-propylene glycol adipic acid) terminated with 2-ethylhexanol, poly(neopentyl glycol-co-1,4-

unterminated, poly(1,3-butylene glycol adipic acid) unterminated, poly(1,2-propylene glycol adipic acid-co-phthalic acid) terminated with 2-ethylhexanol, poly(neopentyl glycol adipic acid) terminated with 2-ethylhexanol, poly(1,2-propylene glycol adipic acid-co-phthalic acid) terminated with 2-ethylhexanol, poly(1,2-propylene glycol-co-1,4-butylene glycol adipic acid) terminated with 2 ethylhexanol, poly(1,3-butylene glycol adipic acid) terminated with mixed fatty acids, poly(1,2-propylene glycol adipic acid) terminated with 2-ethylhexanol, poly(1,2-propylene glycol-co-1,4-butylene glycol adipic acid) terminated with 2-ethylhexanol, poly(1,4-butylene glycol adipic acid), or poly(1,4-butylene glycol-co-ethylene glycol adipic acid).

6. The composition of claim 1 wherein the oligomeric ester has a molecular weight in the range of 500 to 20,000.

7. The composition of claim 1 wherein the oligomeric ester has a molecular weight in the range of 1500 to 7500.

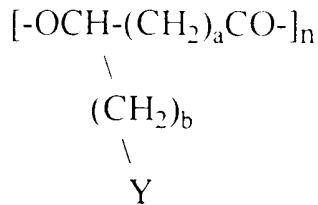
8. The composition of claim 1 wherein the oligomeric ester is present at levels from 1 to 20 wt.% of the blend.

9. The composition of claim 1 wherein the oligomeric ester is present at levels from 2 to 15 wt.% of the blend.

10. The composition of claim 1 wherein the blend comprises two polymers having a relative weight ratio in the blend of 99:1 to 1:99.

11. The composition of claim 1 wherein the blend comprises two polymers having a relative weight ratio in the blend of 80:20 to 20:80.

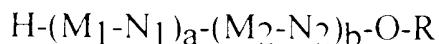
12. The composition of claim 1 wherein the PHA has the structural formula:



where a= 1-4, b=0-15, Y is H, and n is an integer.

13. The composition of claim 1 wherein the PHA is polyhydroxybutyrate or polyhydroxybutyrate-co-valerate.
14. The composition of claim 1 wherein said second polymer is a polyester or copolyester derived from aliphatic dicarboxylic acids or anhydrides, aliphatic dicarboxylic acid chlorides, aliphatic dicarboxylic acid esters, and aliphatic diols or epoxides; a polyurethane made from said polyesters and copolyesters by reaction with a diisocyanate; an aliphatic polycarbonate; a polyanhydride; a polyester amide; a polyester carbonate; a polyester ether; a polyether carbonate, or combinations thereof.
15. The composition of claim 1 wherein one of the polymers or copolymers in the blend is formed from lactone, lactide or glycolide ring-opening polymerization.
16. A polymer composition comprising a polyhydroxyalkanoate (PHA), a polycaprolactone (PCL), and one or more oligomeric esters.
17. The composition of claim 16 wherein the PHA is polyhydroxybutyrate (PHB) or polyhydroxybutyrate-co-valerate (PHBV).
18. The composition of claim 16 wherein the PCL is present at 10 to 40 wt% in the blend.
19. The composition of claim 16 wherein the PCL is present at 20 to 30 wt% in the blend.

20. The composition of claim 16 wherein the oligomeric ester has the structural formula:



where:



X is C_6H_4 or $(CH_2)_f$

a and b are independently 0 or an integer from 1 to 200;

c and f are independently integers from 1 to 30;

R is H or C_1-C_{12} alkyl or branched alkyl; and

R_d and R_e are H, or C_1-C_{12} alkyl or branched alkyl and can vary independently with each $(C)_c$.

21. The composition of claim 20 wherein f is 2 to 10.

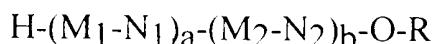
22. The composition of claim 20 wherein f is 4.

23. The composition of claim 16 wherein the oligomeric ester is poly(1,3-butylene glycol-co-1,2-propylene glycol adipic acid) terminated with 2-ethylhexanol, poly(neopentyl glycol-co-1,4-butylene glycol adipic acid) terminated with 2-ethylhexanol, poly(1,3-butylene glycol adipic acid) unterminated, poly(1,3-butylene glycol adipic acid) unterminated, poly(1,2-propylene glycol adipic acid-co-phthalic acid) terminated with 2-ethylhexanol, poly(neopentyl glycol adipic acid) terminated with 2-ethylhexanol, poly(1,2-propylene glycol adipic acid-co-phthalic acid) terminated with 2-ethylhexanol, poly(1,2-propylene glycol-co-1,4-butylene glycol adipic acid) terminated with

propylene glycol adipic acid) terminated with 2-ethylhexanol, poly(1,2-propylene glycol-co-1,4-butylene glycol adipic acid) terminated with 2-ethylhexanol, poly(1,4-butylene glycol adipic acid), or poly(1,4-butylene glycol-co-ethylene glycol adipic acid).

24. A method of producing a shaped polymeric object comprising melting a composition comprising a polyhydroxyalkanoate (PHA), a second biodegradable polymer different from the first polymer, and one or more oligomeric esters, and producing a shaped object therefrom by extrusion, molding, coating, spinning, blowing, thermoforming or calendaring processes or combinations of the processes.

25. The method of claim 24 wherein the oligomeric ester has the structural formula:



where:



X is $-C_6H_4-$ or $-(CH_2)_f$

a and b are independently 0 or an integer from 1 to 200;

c and f are independently integers from 1 to 30;

R is H or C₁-C₁₂ alkyl or branched alkyl; and

R_d and R_e are H, or C₁-C₁₂ alkyl or branched alkyl and can vary independently with each (C)_c.

26. The method of claim 24 wherein f is 2 to 10.

27. The method of claim 24 wherein f is 4.
28. The method of claim 24 wherein the oligomeric ester is poly(1,3-butylene glycol-co-1,2-propylene glycol adipic acid) terminated with 2-ethylhexanol, poly(neopentyl glycol-co-1,4-butylene glycol adipic acid) terminated with 2-ethylhexanol, poly(1,3-butylene glycol adipic acid) unterminated, poly(1,3-butylene glycol adipic acid) unterminated, poly(1,2-propylene glycol adipic acid-co-phthalic acid) terminated with 2-ethylhexanol, poly(neopentyl glycol adipic acid) terminated with 2-ethylhexanol, poly(1,2-propylene glycol adipic acid-co-phthalic acid) terminated with 2-ethylhexanol, poly(1,2-propylene glycol-co-1,4-butylene glycol adipic acid) terminated with 2 ethylhexanol, poly(1,3-butylene glycol adipic acid) terminated with mixed fatty acids, poly(1,2-propylene glycol adipic acid) terminated with 2-ethylhexanol, poly(1,2-propylene glycol-co-1,4-butylene glycol adipic acid) terminated with 2-ethylhexanol, poly(1,4-butylene glycol adipic acid), or poly(1,4-butylene glycol-co-ethylene glycol adipic acid).
29. The method of claim 24 wherein the Mw of the oligomeric ester is 500 to 20000.
30. The method of claim 24 wherein the PHA is polyhydroxybutyrate (PHB) or polyhydroxybutyrate-co-valerate (PHBV).
31. The method of claim 24 wherein the second polymer is polycaprolactone.
32. The method of claim 31 wherein the polycaprolactone is present at 10 to 40 wt.% of the blend.
33. A shaped object made according to claim 24.
34. A shaped object made according to claim 25.

35. A shaped object made according to claim 26.
36. A shaped object made according to claim 27.
37. A shaped object made according to claim 28.
38. A shaped object made according to claim 29.
39. A shaped object made according to claim 30.
40. A shaped object made according to claim 31.
41. A shaped object made according to claim 32.
42. A polymer composition comprising poly-3-hydroxybutyrate-co-4-hydroxybutyrate (P3HB4HB) and a nucleant.
43. The composition of claim 42 wherein the nucleant is boron nitride.
44. The composition of claim 42 wherein the nucleant is present at levels from 0.1 to 20 wt% of the blend.
45. The composition of claim 42 wherein the nucleant is present at levels from 1 to 10 wt% of the blend.
46. A method of producing a shaped polymeric object comprising melting a composition comprising poly-3-hydroxybutyrate-co-4-hydroxybutyrate (P3HB4HB) and a nucleant, and producing a shaped object therefrom by extrusion, molding, coating, spinning, blowing,

47. The method of claim 46 wherein the nucleant is boron nitride.
48. A shaped object made according to claim 46.
49. A shaped object made according to claim 47.